



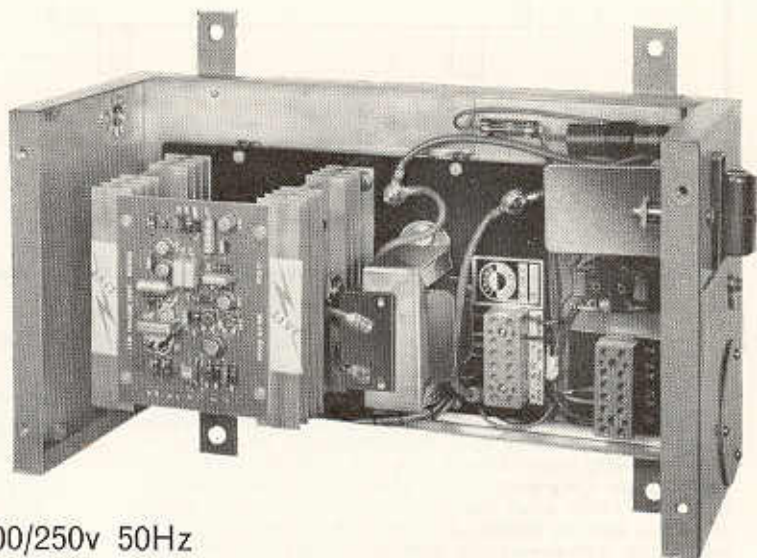
THYRISTOR DIMMERS



UNIT DIMMERS

Type MTU, TU
lever controlled

Type PTU
push button controlled

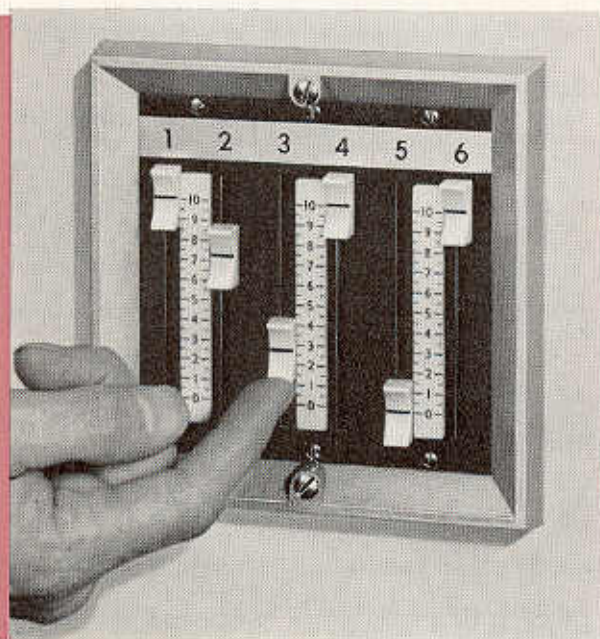


5000W; 2000W; 1000W max. 200/250v 50Hz

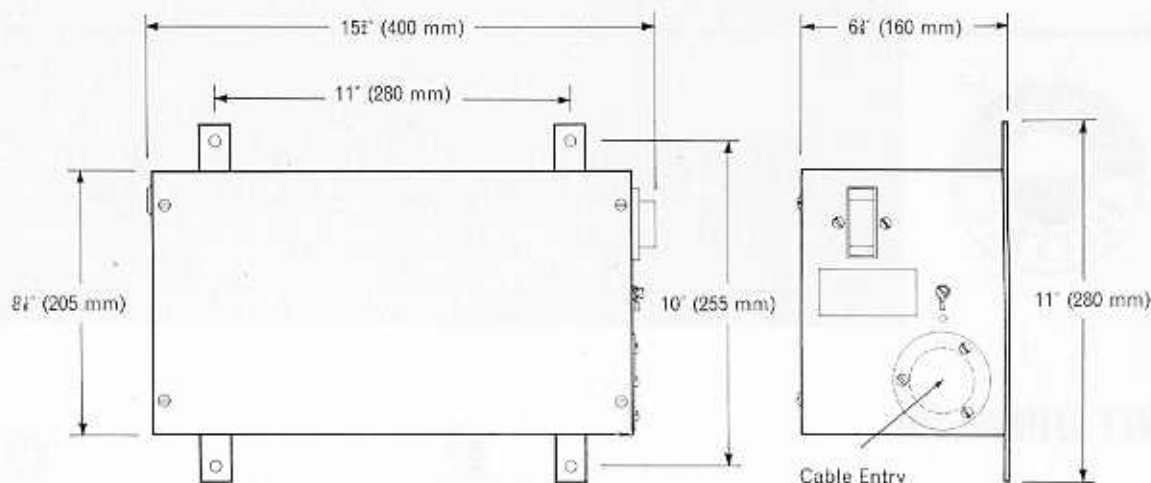
These remotely controlled, variable-load Thyristor dimmers in individual wall-mounting enclosures are ideal for the precise intensity control of auditorium, presentation and display lighting. Each of these solid-state dimmers is complete with a substantial inductive filter and is rated for the full tungsten surge current and for continuous use at any intensity level.

The maximum ratings of individual units are for tungsten filament lamp loads; for hot cathode fluorescent

tubes, with suitable control gear, these ratings are halved. Large loads, or a mixture of tungsten and fluorescent loads, are simply and inexpensively controlled by dividing them into sub-circuits each with a unit dimmer. These dimmers, which can be on different phases of the supply if required, can then all be controlled simultaneously by a single dimmer lever, or by separate dimmer levers, or by multiple sets of push buttons.



A single load circuit, to be controlled by a single dimmer lever, requires a Type TU dimmer. Two or more load circuits, to be controlled either collectively or individually by dimmer levers, require a Type MTU dimmer for one circuit and Type TU dimmers for the remaining circuits. Push button operation requires a Type PTU dimmer for one circuit and Type TU for the remaining circuits collectively controlled. Push button operation is necessary where control from more than one location is required; the Up, Down, or to Preset intensity facilities are instantly available from each and every set of parallel-connected push buttons.



Type TU.20 Weight 9 lb. (4 Kilos)

Type TU.50, MTU.20, PTU.20 Weight 10 lb. (4.5 Kilos)

Type MTU.50, PTU.50 Weight 12 lb. (5.5 Kilos)

SPECIFICATION

The wall-mounting enclosure shall house a Type JTM dimmer for a 200/250 volt 50 cycle single phase and neutral supply. The enclosure shall be constructed of aluminium pressings with external fixing lugs and be finished hammer-grey outside. Only front access shall be required to remove the cover which shall have close-mesh ventilation grilles at the top and the bottom. A 2-inch (50mm) diameter cable entry hole, with coverplate, shall be provided in the right-hand end together with a shrouded-contact fuse, colour-coded fuse bridge and quick-acting HRC fuse to give full load fault protection.

The total heat dissipated by the dimmer shall not exceed 2 1/2% of the maximum load capacity. In confined spaces external means may be necessary to ensure that the ambient temperature does not exceed 95°F (35°C).

The regulation of the lamp load shall be wholly by a pair of Thyristors (controlled rectifiers) and these shall be of a type which will allow the full tungsten surge current to flow. The output shall be AC with a waveform which is completely symmetrical with respect to the zero voltage and current. An inductive filter network shall be included to reduce the risetime of the output waveform to not less than 300 micro-seconds at the 90° conduction point in the power cycle at full load. The maximum output shall not be less than 98% of the supply voltage. There shall be no restriction whatsoever on the addition of load to a partially loaded dimmer provided the total load does not then exceed the maximum rating.

Each dimmer shall generate its own power supplies for the printed circuit trigger unit which shall include trimming adjustments for full-on and blackout. The control signal input shall be completely isolated from the load circuit and the control signal shall not need to be related to the phase of the load circuit.

The various models shall be identified as follows:—

Type TU.50 5000W max.

Type TU.20 2000W max.

Type TU.10 1000W max.

Basic Thyristor unit dimmer for single load, single dimmer lever controlled; also used, in conjunction with a Type MTU or PTU, for the additional load circuits of multiple-circuit installations.

Type MTU.50 5000W max.

Type MTU.20 2000W max.

Type MTU.10 1000W max.

Thyristor unit dimmer with the larger control circuit power supply necessary for multiple-circuit installations. Additional load circuits each require a Type TU and can be controlled collectively or separately by dimmer lever(s).

Type PTU.50 5000W max.

Type PTU.20 2000W max.

Type PTU.10 1000W max.

Thyristor unit dimmer with integral solid-state controller providing Up, Down, or to Preset intensity from external, parallel-connected sets of three momentary-contact push buttons. Up time, from blackout to full-on shall be preset for 7 seconds, but adjustable for 5-15 seconds. Down time shall be preset for 15 seconds, but adjustable for 5-30 seconds. Preset intensity level shall be determined by local rotary control on right-hand end. Additional load circuits each require a Type TU.

Maximum load ratings, given above, are for 200/250V tungsten filament lamps. These ratings are halved for hot cathode fluorescent tubes which require suitable control gear and earthed metal proximity along the length of each tube.

VARIATIONS *available at time of order*

Equipment for 200/250V 60 cycle supplies is available. Similar equipment is available for 110/120V 60 cycle supplies. For large installations 10 or 20-dimmer racks are available. Colour cycle dimmers (solid state controlled) are available.

DIMMER LEVER CONTROL BOXES

These shall consist of a die-cast escutcheon plate, fitted with the requisite number of dimmer levers, and a sheet metal box with cable entry knock-outs at top, side and bottom. The dimmer levers shall have a linear motion with a fixed white scale, clearly graduated from 0 to 10 with half divisions, shared between adjacent-numbered levers. Ref. 691-694 series shall have a shallow box 1 1/2-in. (40mm) deep (external connections are direct to solder tags on the dimmer lever units). Ref. 711-720 series have internal wiring to a pressure-pad terminal block housed in a 2 1/2-in. (60mm) deep box.

	Overall Width	Overall Height
Ref. 691 1-lever, shallow box	4 1/2" (110mm)	5 1/2" (150mm)
Ref. 692 2-lever, shallow box		
Ref. 694 4-lever, shallow box		
Ref. 711 1-lever, deep box	4 1/2" (110mm)	5 1/2" (150mm)
Ref. 712 2-lever, deep box		
Ref. 714 4-lever, deep box		
Ref. 716 6-lever, deep box	5 1/2" (150mm)	5 1/2" (150mm)
Ref. 718 8-lever, deep box	8 1/2" (225mm)	5 1/2" (150mm)
Ref. 720 10-lever, deep box		